

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/016467

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B29C44/12 B60R13/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B29C B60R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 992 224 A (SWENSON ET AL) 12 February 1991 (1991-02-12)	1-4, 6-13, 16, 22, 30-33
Y	column 4, line 4 - column 5, line 35; figures 2-5	14-19, 23-27
Y	US 3 933 562 A (CRUCKSHANK ET AL) 20 January 1976 (1976-01-20) column 11, line 11 - line 29; figures 15a-15c	14-19, 23-27
X	US 5 895 613 A (NAKAI ET AL) 20 April 1999 (1999-04-20) column 2, line 61 - column 4, line 34; figures	1, 2, 4-6, 8-13, 22, 30, 32, 33

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

4 February 2005

Date of mailing of the international search report

21/02/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 501 541 A (BETHELL ET AL) 26 February 1985 (1985-02-26) column 5, line 46 - line 63; figure 2	1,2,4, 6-10, 12-15, 22,23, 30-33
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04, 31 August 2000 (2000-08-31) -& JP 2000 006283 A (NISHIKAWA KASEI CO LTD), 11 January 2000 (2000-01-11) abstract; figures 2,3	1,2,8,9, 16

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International Application No
PCT/US2004/016467

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4992224	A	12-02-1991	US 4793793 A	27-12-1988
US 3933562	A	20-01-1976	US 3753830 A	21-08-1973
US 5895613	A	20-04-1999	NONE	
US 4501541	A	26-02-1985	US 4853995 A	08-08-1989
			CA 1188433 A1	04-06-1985
			CA 1199130 A2	07-01-1986
			EP 0108466 A2	16-05-1984
			JP 59062123 A	09-04-1984
			US 4542887 A	24-09-1985
JP 2000006283	A	11-01-2000	JP 3155244 B2	09-04-2001